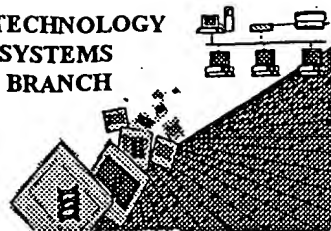


*Link*

## RAW SEQUENCE LISTING ERROR REPORT

BIOTECHNOLOGY  
SYSTEMS  
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/537,710  
Source: 1600  
Date Processed by STIC: 4/8/02

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER  
VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND  
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name,  
Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two,  
2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office,  
Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

SERIAL NUMBER: 091537, 710



**Does Not Comply**  
**Corrected Diskette Needed**

1600

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/537,710

DATE: 04/08/2002  
TIME: 10:57:03

Input Set : A:\EP.txt  
Output Set: N:\CRF3\04082002\I537710.raw

3 <110> APPLICANT: Dahlqvist, Andres  
4 Stahl, Ulf  
5 Lenman, Marit  
6 Banas, Antoni  
7 Ronne, Hans  
9 <120> TITLE OF INVENTION: A new class of enzymes in the biosynthetic pathway for the  
production  
10 of  
11 triacylglycerol and recombinant DNA molecules encoding these enzymes  
13 <130> FILE REFERENCE: BASFnae337799PCT1-15  
15 <140> CURRENT APPLICATION NUMBER: US 09/537,710  
17 <141> CURRENT FILING DATE: 2000-03-30  
19 <150> PRIOR APPLICATION NUMBER: EP 99106656.4  
20 <151> PRIOR FILING DATE: 1999-04-01  
22 <160> NUMBER OF SEQ ID NOS: 31  
24 <170> SOFTWARE: WordPerfect version 6.1

#### ERRORED SEQUENCES

457 <210> SEQ ID NO: 5  
458 <211> LENGTH: 2427  
459 <212> TYPE: DNA  
460 <213> ORGANISM: Arabidopsis thaliana  
462 <400> SEQUENCE: 5  
463 agaaacagct ctttgtctct ctcgactgat ctaacaatcc ctaatctgtg ttctaaattc 60  
464 ctggacgaga ttgacaaaag tccgtatagc ttaacctggt ttaatttcaa gtgacagata 120  
465 tgccccttat tcatcggaaa aagccgacgg agaaaccatc gacgcgcgcca tctgaagagg 180  
466 tgggtgcacga tgaggattcg caaaagaaac cacacgaatc ttccaaatcc caccataaga 240  
467 aatcgaacgg aggagggaag tggctgtgca tcgattcttg ttggttggtc attgggtgtg 300  
468 tgtgtgtaac ctggtggttt cttctcttcc tttacaacgc aatgcctgcg agcttcctc 360  
469 agtatgtaac ggagcgaatc acgggtcctt tgccctgaccc gcccggtggt aagctcaaaa 420  
470 aaagaagggtc ttaaggcgaa acatcctggt gtcttcatc ctgggattgt caccgggtggg 480  
471 ctcgagcttt gggaaggcaa acaatgcgct gatggtttat ttagaaaacg tttgtggggt 540  
472 ggaacttttg gtgaagtcta caaaaggcct ctatgttggg tggaacacat gtcacttgac 600  
473 aatgaaactg ggttggatcc agctggtatt agagttcgag ctgtatcagg actcgtggct 660  
474 gctgactact ttgctcctgg ctactttgtc tgggcagtg tgattgctaa ccttgacat 720  
475 attggatatg aagagaaaaa tatgtacatg gctgcatatg actggcggct ttcgtttcag 780  
476 aacacagagg tacgtgatca gactcttagc cgtatgaaaa gtaatataga gttgatggtt 840  
477 tctaccaacg gtggaaaaaa agcagttata gttccgcatt ccatgggggt cttgtatttt 900  
478 ctacatttta tgaagtgggt tgaggcacca gtcctctggt gtggcggggg tgggccagat 960  
479 tgggtgtgcaa agtatattaa ggcgggtgat aacattgggt gaccatttct tgggtgttcca 1020  
480 aaagctggtt cagggtttt ctctgctgaa gcaaaggatg ttgcagttgc cagagcgatt 1080  
481 gccccaggat tcttagacac cgatatattt agacttcaga ccttgcagca tgtaatgaga 1140

The type of errors shown exist throughout  
the Sequence Listing. Please check subsequent  
sequences for similar errors.

*Ns detected in sequence -  
requires explanation; see error  
summary sheet item 9*

## RAW SEQUENCE LISTING

DATE: 04/08/2002

PATENT APPLICATION: US/09/537,710

TIME: 10:57:03

Input Set : A:\EP.txt

Output Set: N:\CRF3\04082002\I537710.raw

```

482 atgacacgca catgggactc aacaatgtct atgttaccga agggagggtga caccgatatgg 1200
483 ggcgggcttg attggtcacc ggagaaaggg caccactgtt gtgggaaaaa gcaaaagaac 1260
484 aacgaaactt gtggtgaagc aggtgaaaac ggagtttcca agaaaagtcc tgttaactat 1320
485 ggaaggatga tatcttttgg gaaagaagta gcagaggctg cgccatctga gattaataat 1380
486 attgattttc gaggtgctgt caaagggtcag agtatcccaa atcacacctg tcgtgacgtg 1440
487 tggacagagt accatgacat gggaattgct gggatcaaag ctatcgctga gtataaggtc 1500
488 tacactgctg gtgaagctat agatctacta cattatgttg ctctaagat gatggcgctg 1560
489 ggtgccgctc atttctctta tgggaattgct gatgatttgg atgacaccaa gtatcaagat 1620
490 cccaaatact ggtcaaatcc gttagagaca aaattaccga atgctcctga gatggaaatc 1680
491 tactcattat acggagtggg gataccaacg gaacgagcat acgtatacaa gcttaaccag 1740
492 tctcccgaca gttgcatccc ctttcagata ttcacttctg ctcacgagga ggacgaagat 1800
493 agctgtctga aagcaggagt ttacaatgtg gatggggatg aaacagtacc cgtcctaagt 1860
494 gccgggtaca tgtgtgcaaa agcgtggcgt ggcaagacaa gattcaacce ttccggaatc 1920
495 aagacttata taagagaata caatcactct ccgccggcta acctgttgga agggcgcggg 1980
496 acgcagagtg gtgcccatgt tgatatcatg ggaaactttg ctttgatcga agatatcatg 2040
497 agggttgccg ccggaggtaa cgggtctgat ataggacatg accagggtcca ctctggcata 2100
498 tttgaatggt cggagcgtat tgacctgaag ctgtgaatat catgatctct ttaagctgtc 2160
499 ctgtcagctt atgtgaatcc aatactttga aagagagatc atcatcaatt catcatcatc 2220
500 gtcacatcaa tgatgctcaa ctacaaaaga agcctgagaa tgatactttg gtgcgaaatt 2280
501 ctcaatacct ctttaattatt cttattgaat gttaaattata caatcctatc taatgtttga 2340
E--> 502 acgataacac aaaacttgct gggccatgt ttgtttgtct tgtcaaaagc atcaatttgt 2400
503 gggttaaaaa aaaaaaaaaa aaaaaaa 2427
719 <210> SEQ ID NO: 9
720 <211> LENGTH: 616
721 <212> TYPE: DNA
722 <213> ORGANISM: Neurospora crassa
724 <400> SEQUENCE: 9
E--> 725 ggtggcgaag acgagggcgg aagttggagg ctaacgagaa tgacnctcgg agatggatct 60
E--> 726 accctctaga gacacgacta cctttgcacc cagcctcaag gntacngtt tntatgggta 120
727 ggaagccgac ggagcgcagc tacatctatc tggcgcccgga tcccgggacg acaacgcac 180
E--> 728 tttagatgac gatcgatacg actttgactn aggggcacat tgaccacggg gtgattttgg 240
729 gcgaaggcga tggcacagtg aaccttatga gtttggggta cctgtgcaat aaggggtgga 300
730 aatgaagag atacaatcct gcgggctcaa aaataaccgt ggtcgagatg ccgcataaac 360
731 cagaacggtt caatccgaga ggaggccgga atacggcgga tcacgtggat attctaggaa 420
732 ggcagaatct aaacgagtac attcttaaag tggcggcagg tcgaggcgat acaattgagg 480
733 attttattac tagtaattatt cttaaataat tagaaaagggt tgaaatttat gaagagtaat 540
734 taaatacggc acataggtta ctcaatagta tgactaatta aaaaaaaatt ttttttctaa 600
735 aaaaaaaaaa aaaaaa 616
866 <210> SEQ ID NO: 13
867 <211> LENGTH: 623
868 <212> TYPE: PRT
869 <213> ORGANISM: Schizosaccharomyces pombe
E--> 871 <400> SEQUENCE: 15
872 Met Ala Ser Ser Lys Lys Ser Lys Thr His Lys Lys Lys Lys Glu Val
873 1 5 10 15
875 Lys Ser Pro Ile Asp Leu Pro Asn Ser Lys Lys Pro Thr Arg Ala Leu
876 20 25 30
878 Ser Glu Gln Pro Ser Ala Ser Glu Thr Gln Ser Val Ser Asn Lys Ser
879 35 40 45

```

Same error

Seq. ID nos differ!

## RAW SEQUENCE LISTING

DATE: 04/08/2002

PATENT APPLICATION: US/09/537,710

TIME: 10:57:03

Input Set : A:\EP.txt

Output Set: N:\CRF3\04082002\I537710.raw

```

881 Arg Lys Ser Lys Phe Gly Lys Arg Leu Asn Phe Ile Leu Gly Ala Ile
882      50                      55                      60
884 Leu Gly Ile Cys Gly Ala Phe Phe Phe Ala Val Gly Asp Asp Asn Ala
885 65                      70                      75                      80
887 Val Phe Asp Pro Ala Thr Leu Asp Lys Phe Gly Asn Met Leu Gly Ser
888      85                      90                      95
890 Ser Asp Leu Phe Asp Asp Ile Lys Gly Tyr Leu Ser Tyr Asn Val Phe
891      100                      105                      110
893 Lys Asp Ala Pro Phe Thr Thr Asp Lys Pro Ser Gln Ser Pro Ser Gly
894      115                      120                      125
896 Asn Glu Val Gln Val Gly Leu Asp Met Tyr Asn Glu Gly Tyr Arg Ser
897      130                      135                      140
899 Asp His Pro Val Ile Met Val Pro Gly Val Ile Ser Ser Gly Leu Glu
900 145                      150                      155                      160
902 Ser Trp Ser Phe Asn Asn Cys Ser Ile Pro Tyr Phe Arg Lys Arg Leu
903      165                      170                      175
905 Trp Gly Ser Trp Ser Met Leu Lys Ala Met Phe Leu Asp Lys Gln Cys
906      180                      185                      190
908 Trp Leu Glu His Leu Met Leu Asp Lys Lys Thr Gly Leu Asp Pro Lys
909      195                      200                      205
911 Gly Ile Lys Leu Arg Ala Ala Gln Gly Phe Glu Ala Ala Asp Phe Phe
912      210                      215                      220
914 Ile Thr Gly Tyr Trp Ile Trp Ser Lys Val Ile Glu Asn Leu Ala Ala
915 225                      230                      235                      240
917 Ile Gly Tyr Glu Pro Asn Asn Met Leu Ser Ala Ser Tyr Asp Trp Arg
918      245                      250                      255
920 Leu Ser Tyr Ala Asn Leu Glu Glu Arg Asp Lys Tyr Phe Ser Lys Leu
921      260                      265                      270
923 Lys Met Phe Ile Glu Tyr Ser Asn Ile Val His Lys Lys Lys Val Val
924      275                      280                      285
926 Leu Ile Ser His Ser Met Gly Ser Gln Val Thr Tyr Tyr Phe Phe Lys
927      290                      295                      300
929 Trp Val Glu Ala Glu Gly Tyr Gly Asn Gly Gly Pro Thr Trp Val Asn
930 305                      310                      315                      320
932 Asp His Ile Glu Ala Phe Ile Asn Ile Ser Gly Ser Leu Ile Gly Ala
933      325                      330                      335
935 Pro Lys Thr Val Ala Ala Leu Leu Ser Gly Glu Met Lys Asp Thr Gly
936      340                      345                      350
938 Ile Val Ile Thr Leu Asn Ile Leu Glu Lys Phe Phe Ser Arg Ser Glu
939      355                      360                      365
941 Arg Ala Met Met Val Arg Thr Met Gly Gly Val Ser Ser Met Leu Pro
942      370                      375                      380
944 Lys Gly Gly Asp Val Ala Pro Asp Asp Leu Asn Gln Thr Asn Phe Ser
945 385                      390                      395                      400
947 Asn Gly Ala Ile Ile Arg Tyr Arg Glu Asp Ile Asp Lys Asp His Asp
948      405                      410                      415
950 Glu Phe Asp Ile Asp Asp Ala Leu Gln Phe Leu Lys Asn Val Thr Asp
951      420                      425                      430
953 Asp Asp Phe Lys Val Met Leu Ala Lys Asn Tyr Ser His Gly Leu Ala

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/537,710

DATE: 04/08/2002

TIME: 10:57:03

Input Set : A:\EP.txt

Output Set: N:\CRF3\04082002\I537710.raw

```

954          435          440          445
956 Trp Thr Glu Lys Glu Val Leu Lys Asn Asn Glu Met Pro Ser Lys Trp
957          450          455          460
959 Ile Asn Pro Leu Glu Thr Ser Leu Pro Tyr Ala Pro Asp Met Lys Ile
960 465          470          475          480
962 Tyr Cys Val His Gly Val Gly Lys Pro Thr Glu Arg Gly Tyr Tyr Tyr
963          485          490          495
965 Thr Asn Asn Pro Glu Gly Gln Pro Val Ile Asp Ser Ser Val Asn Asp
966          500          505          510
968 Gly Thr Lys Val Glu Asn Gly Ile Val Met Asp Asp Gly Asp Gly Thr
969          515          520          525
971 Leu Pro Ile Leu Ala Leu Gly Leu Val Cys Asn Lys Val Trp Gln Thr
972          530          535          540
974 Lys Arg Phe Asn Pro Ala Asn Thr Ser Ile Thr Asn Tyr Glu Ile Lys
975 545          550          555          560
977 His Glu Pro Ala Ala Phe Asp Leu Arg Gly Gly Pro Arg Ser Ala Glu
978          565          570          575
980 His Val Asp Ile Leu Gly His Ser Glu Leu Asn Glu Ile Ile Leu Lys
981          580          585          590
983 Val Ser Ser Gly His Gly Asp Ser Val Pro Asn Arg Tyr Ile Ser Asp
984          595          600          605
986 Ile Gln Glu Ile Ile Asn Glu Ile Asn Leu Asp Lys Pro Arg Asn
987          610          615          620

```

2353 &lt;210&gt; SEQ ID NO: 8b

2354 &lt;211&gt; LENGTH: 516

2355 &lt;212&gt; TYPE: DNA

2356 &lt;213&gt; ORGANISM: Neurospora crassa

2358 &lt;400&gt; SEQUENCE: 8b

*Some error N's detected*

```

E--> 2359 ggtggcgaag acgagggcgg aagttggagg ctaacgagaa tgacnctcgg agatggatct 60
E--> 2360 accctctaga gacacgacta cdnttgacc cagcctcaag gntacngtt thtatgggta 120
2361 ggaagccgac ggagcggagcc tacatctatc tggegcgccga tcccgggacg acaacgcac 180
E--> 2362 tttagatgac gatcgatacg actttgactn aggggcacat tgaccacggt gtgattttgg 240
2363 gcgaaggcga tggcacagtg aacettatga gtttggggta cctgtgcaat aaggggtgga 300
2364 aaatgaagag atacaatcct gcgggctcaa aaataaccgt ggtcgagatg ccgcatgaac 360
2365 cagaacggtt caatccgaga ggagggccga atacggcgga cttaaataatg tagaaaaggt 420
2366 tgaaatttat gaagagtaat taaatacggc acataggtta ctcaatagta tgactaatta 480
2367 aaaaaaattt ttttttctaa aaaaaaaaaa aaaaaa 516

```

## VERIFICATION SUMMARY

DATE: 04/08/2002

PATENT APPLICATION: US/09/537,710

TIME: 10:57:04

Input Set : A:\EP.txt

Output Set: N:\CRF3\04082002\I537710.raw

L:502 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:5  
L:679 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:7  
L:683 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:7  
L:689 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:7  
L:689 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:691 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:7  
L:691 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:725 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:9  
M:340 Repeated in SeqNo=9  
L:871 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:13 differs:15  
L:2254 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:5  
L:2254 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:2255 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:5  
L:2255 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:2266 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:5  
L:2266 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:2267 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:5  
L:2267 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:2313 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:6  
L:2317 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:6  
L:2323 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:6  
L:2323 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:2325 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:6  
L:2325 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:2359 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:8  
M:340 Repeated in SeqNo=8